

Message Text

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ORIGIN OES-06

INFO OCT-01 ARA-10 EUR-12 EA-09 NEA-10 IO-13 ISO-00 FEA-01

ACDA-10 CIAE-00 INR-07 L-03 NSAE-00 NSC-05 EB-07

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FM SECSTATE WASHDC

TO AMEMBASSY BERN PRIORITY

AMEMBASSY BONN

AMCONSUL BOMBAY

AMEMBASSY BRASILIA

AMEMBASSY BRUSSELS

AMEMBASSY COPENHAGEN

AMEMBASSY HELSINKI

AMEMBASSY LONDON

AMEMBASSY MADRID

AMEMBASSY MEXICO

AMEMBASSY NEW DELHI

AMEMBASSY PARIS

AMCONSUL RIO DE JANEIRO

AMEMBASSY ROME

AMEMBASSY SEOUL

AMEMBASSY STOCKHOLM

AMEMBASSY TAIPEI

AMEMBASSY TEHRAN

AMEMBASSY THE HAGUE

AMEMBASSY TOKYO

AMEMBASSY VIENNA

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USMISSION OECD PARIS

USMISSION IAEA VIENNA

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EMBASSY PLEASE PASS TO SCICONS & SCIATTS

E.O. 11652: N/A

TAGS: TECH,

SUBJECT: SIX NUCLEAR POWER PLANTS TO BE CHECKED FOR
POSSIBLE STEAM GENERATOR TUBE PROBLEMS

REF: A. A-219; REF: B. STATE 263642

1. THE FOLLOWING IS THE TEXT OF AN NRC PRESS RELEASE
DATED OCTOBER 28, 1976. PLEASE PASS ON AN URGENT BASIS
TO THE TECHNICAL NOTIFICATION ADDRESSEES LISTED IN REF.A,
AND PARAGRAPH 7 OF REQ.B.

2. QUOTE: WESTINGHOUSE ELECTRIC CORPORATION HAS ADVISED
THE STAFF OF THE NUCLEAR REGULATORY COMMISSION OF A POTEN-
TIAL SAFETY-RELATED PROBLEM WHICH CAUSED FAILURE OF A
STEAM GENERATOR TUBE. PRELIMINARY INFORMATION FROM AN
EXAMINATION OF TUBES FROM THE STEAM GENERATOR INDICATES THE
FAILURE RESULTED FROM A PREVIOUSLY IDENTIFIED PHENOMENON
CALLED TUBE "DENTING."

3. MODERN, LARGE WESTINGHOUSE PRESSURIZED WATER REACTORS
GENERALLY HAVE THREE OR FOUR STEAM GENERATORS EACH CON-
TAINING MORE THAN 3,000 U-SHAPED TUBES SUPPORTED AT SEVERAL
LEVELS BY HORIZONTAL STEEL PLATES. DENTING OCCURS WHEN
SOLID MATERIAL, PRECIPITATED FROM THE WATER, AND CORROSION

PRODUCTS LODGE BETWEEN THESE STEEL PLATES AND THE TUBES,
CAUSING THE TUBES TO BE COMPRESSED AND DENTED INWARD.
THE RESULTING STRESSES CAN ALSO CAUSE THE STEEL PLATES TO
DEFORM, CAUSING FURTHER STRESSING AND DISTORTION OF THE
TUBES.

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4. EXTENSIVE DENTING IS KNOWN TO BE OCCURRING AT SIX
WESTINGHOUSE-SUPPLIED REACTORS. UTILITY OPERATORS OF
FIVE OF THESE PLANTS MET WITH THE NRC STAFF OCTOBER 26
AND EACH FILED A WRITTEN COMMITMENT TO PERFORM DETAILED
INSPECTIONS OF THEIR STEAM GENERATORS IN THE NEAR FUTURE.
BASED ON THE INSPECTION RESULTS, THE UTILITIES WILL
COMPLETE A REPAIR PROGRAM IF NECESSARY AND OBTAIN NRC
STAFF APPROVAL PRIOR TO RESTARTING THEIR PLANTS. THE

SIXTH PLANT, IS SHUT DOWN UNTIL NEXT SPRING. WHILE THE UTILITY DID NOT ATTEND THE MEETING, IT DID SUBMIT A WRITTEN COMMITMENT NOT TO RESTART UNTIL AN NRC-APPROVED INVESTIGATION AND REPAIR PROGRAM HAS BEEN COMPLETED.

5. THE OTHER AFFECTED PLANTS WILL BE SHUT DOWN BY MID-NOVEMBER. INSPECTION AND REPAIRS, IF NECESSARY, ARE EXPECTED TO TAKE ABOUT A MONTH.

6. IF A STEAM GENERATOR TUBE FAILS, THE LEAKAGE CAN BE DETECTED RAPIDLY AND THE REACTOR SHUT DOWN. THE REPAIR OF THE FAILED TUBES GENERALLY CONSISTS OF PLUGGING THEM AT BOTH ENDS. THIS ALREADY HAS BEEN DONE AT ONE UNIT. AT THE MEETING, THE THREE UTILITIES PRESENTED THEIR PROPOSED INSPECTION AND REPAIR PROGRAMS TO THE NRC STAFF. THE STAFF HAS REVIEWED THE COMMITMENTS AND INVESTIGATION PROGRAM AND HAS CONCLUDED THAT THESE ACTIONS ARE APPROPRIATE AND THAT NO FURTHER LICENSING ACTION IS NECESSARY AT THIS TIME. UNQUOTE. KISSINGER

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